FIG.1

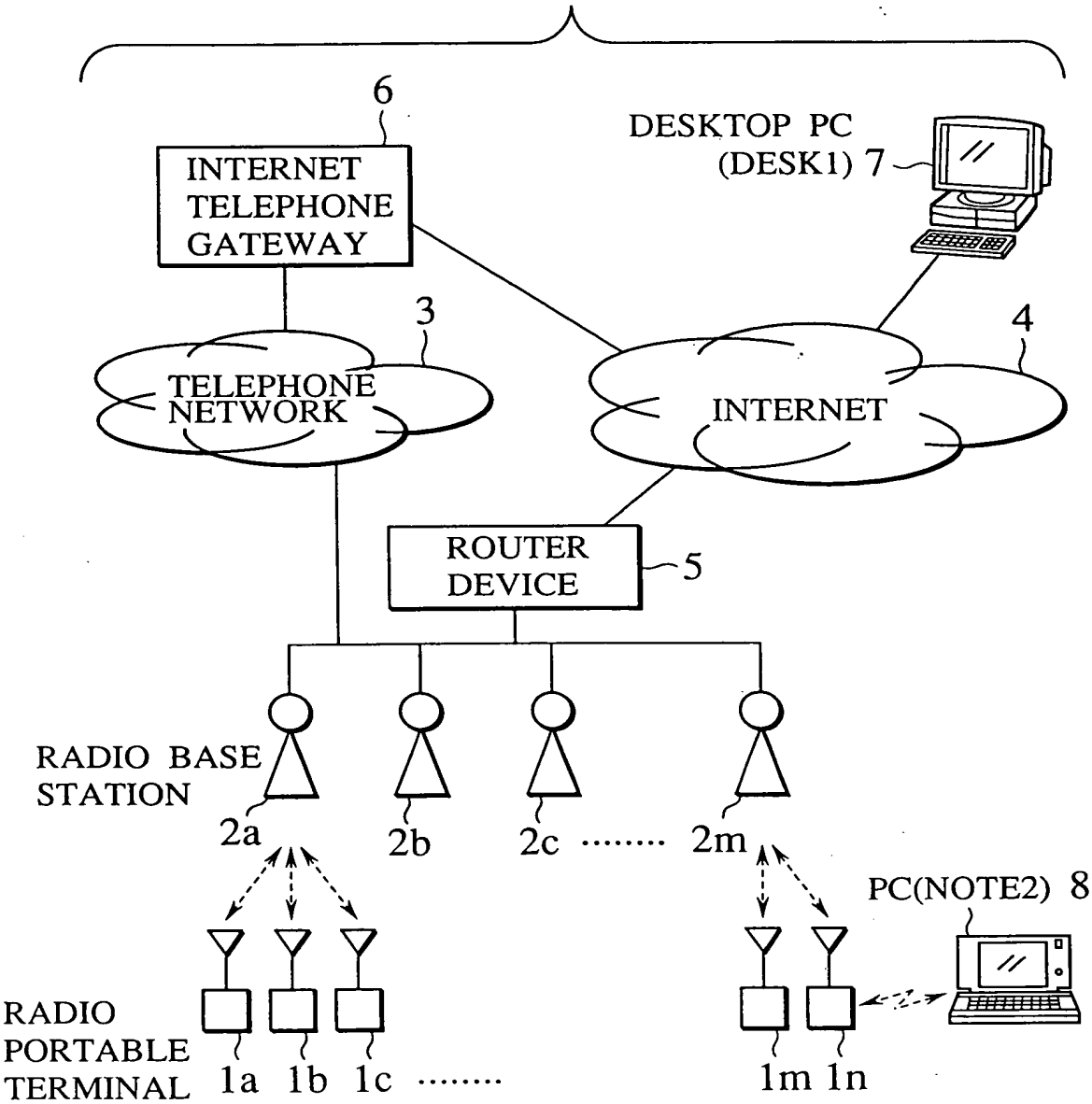
6
INTERNET TELEPHONE GATEWAY
DESKTOP PC (DESK1) 7
3
TELEPHONE NETWORK
4
INTERNET
ROUTER DEVICE
5
RADIO BASE STATION
2a
2b
2c 2m
PC(NOTE2) 8
RADIO PORTABLE TERMINAL
1a 1b 1c .....
1m 1n

FIG.2

IP header (20 Bytes)
UDP header (8 Bytes)
RTP header (12 Bytes)
VOICE DATA(40Bytes)

FIG.3

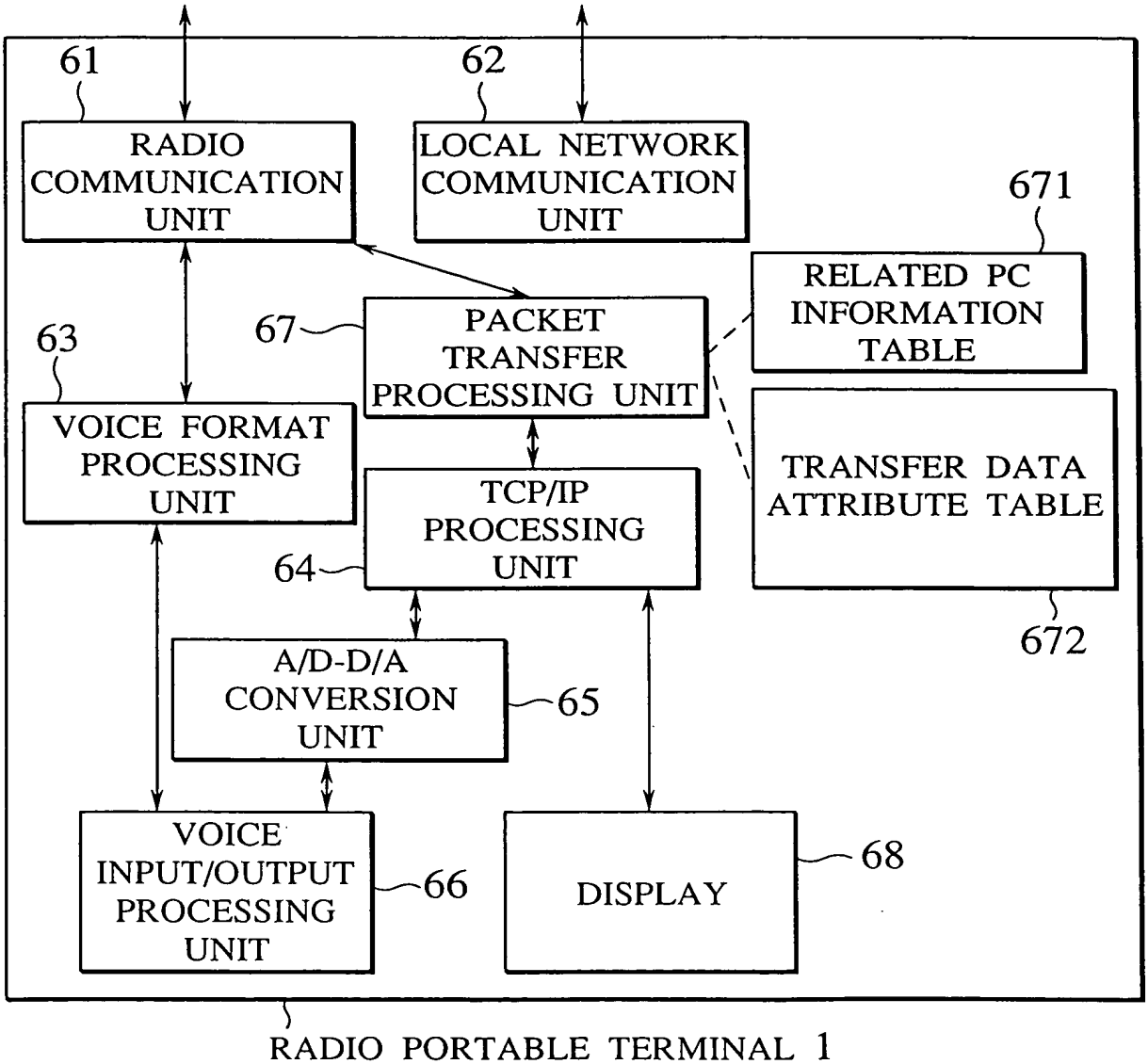
61
62
RADIO COMMUNICATION UNIT
LOCAL NETWORK COMMUNICATION UNIT
671
RELATED PC INFORMATION TABLE
63
67
PACKET TRANSFER PROCESSING UNIT
VOICE FORMAT PROCESSING UNIT
TCP/IP PROCESSING UNIT
64
TRANSFER DATA ATTRIBUTE TABLE
672
A/D-D/A CONVERSION UNIT
65
VOICE INPUT/OUTPUT PROCESSING UNIT
66
DISPLAY
68
RADIO PORTABLE TERMINAL 1

FIG.4

# Hostname	Network	Address/Media
DESK1	Internet	133.196.16.201
NOTE2	Local	IrDA

FIG.5

# Hostname	Network	Address/Media	Preference
DESK1	Internet	133.196.16.201	2
NOTE2	Local	IrDA	1

FIG.6

# Hostname	Network	Address/Media	Preference	Status
DESK1	Internet	133.196.16.201	2	alive
NOTE2	Local	IrDA	1	N/A

FIG.7

APPL=IP-tel, Datasize > 100KB, Forward : Attachment
APPL=ftp, Datasize > 100KB, Forward : File
APPL=Internet-advertisement, Forward : NO
APPL=Internet-news-clip, Forward : NO
APPL=IP-tel-send, areacode=408, Forward : to DESK1

FIG.8

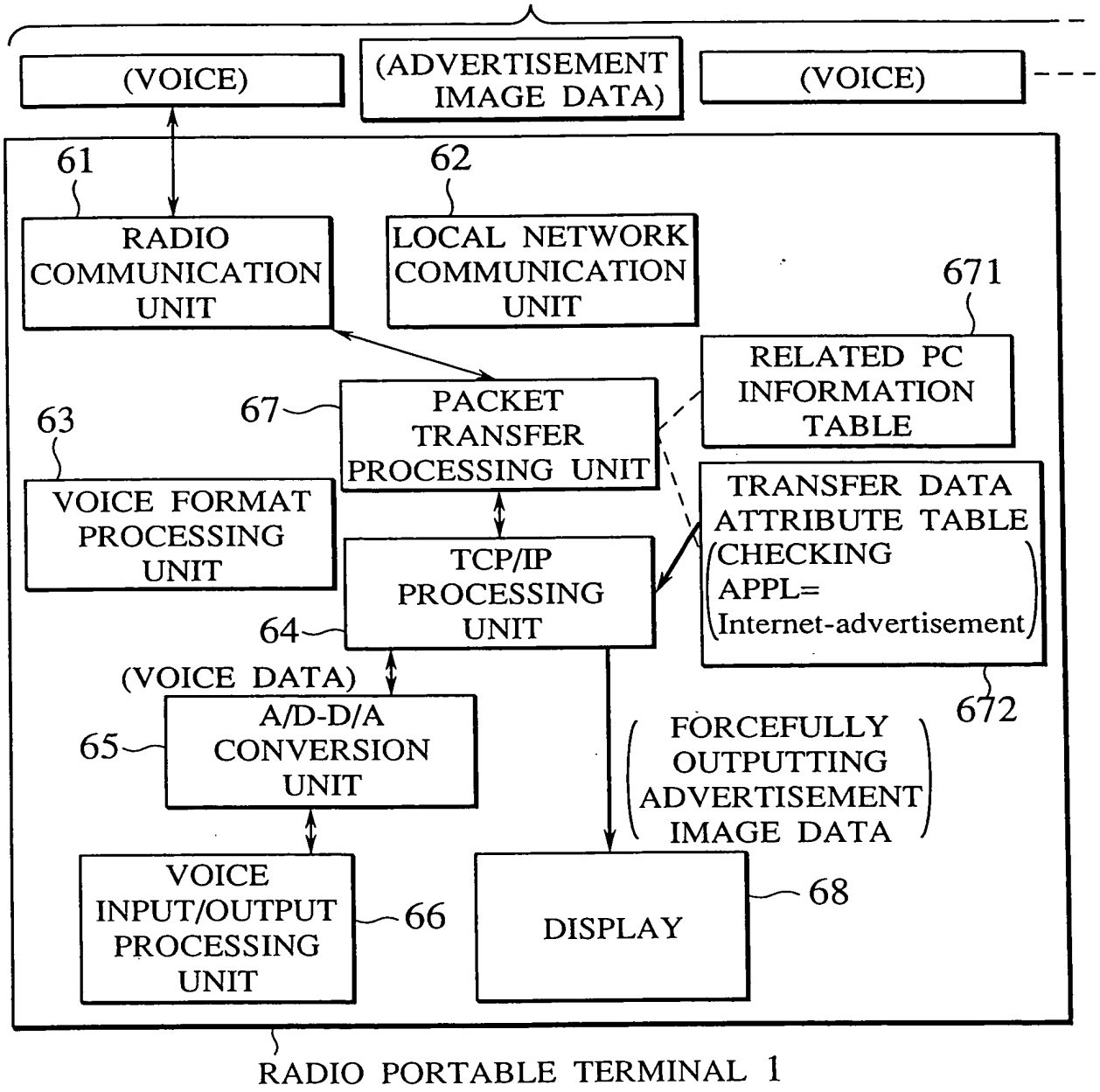
ADVERTISEMENT ATTACHED VOICE DATA PACKETS
(VOICE)
(ADVERTISEMENT IMAGE DATA)
(VOICE)
61
62
RADIO COMMUNICATION UNIT
LOCAL NETWORK COMMUNICATION UNIT
671
RELATED PC INFORMATION TABLE
67
PACKET TRANSFER PROCESSING UNIT
63
VOICE FORMAT PROCESSING UNIT
TRANSFER DATA ATTRIBUTE TABLE
(CHECKING APPL= Internet-advertisement)
TCP/IP PROCESSING UNIT
64
(VOICE DATA)
672
A/D-D/A CONVERSION UNIT
65
FORCEFULLY OUTPUTTING ADVERTISEMENT IMAGE DATA
VOICE INPUT/OUTPUT PROCESSING UNIT
66
DISPLAY
68
RADIO PORTABLE TERMINAL 1

FIG.9

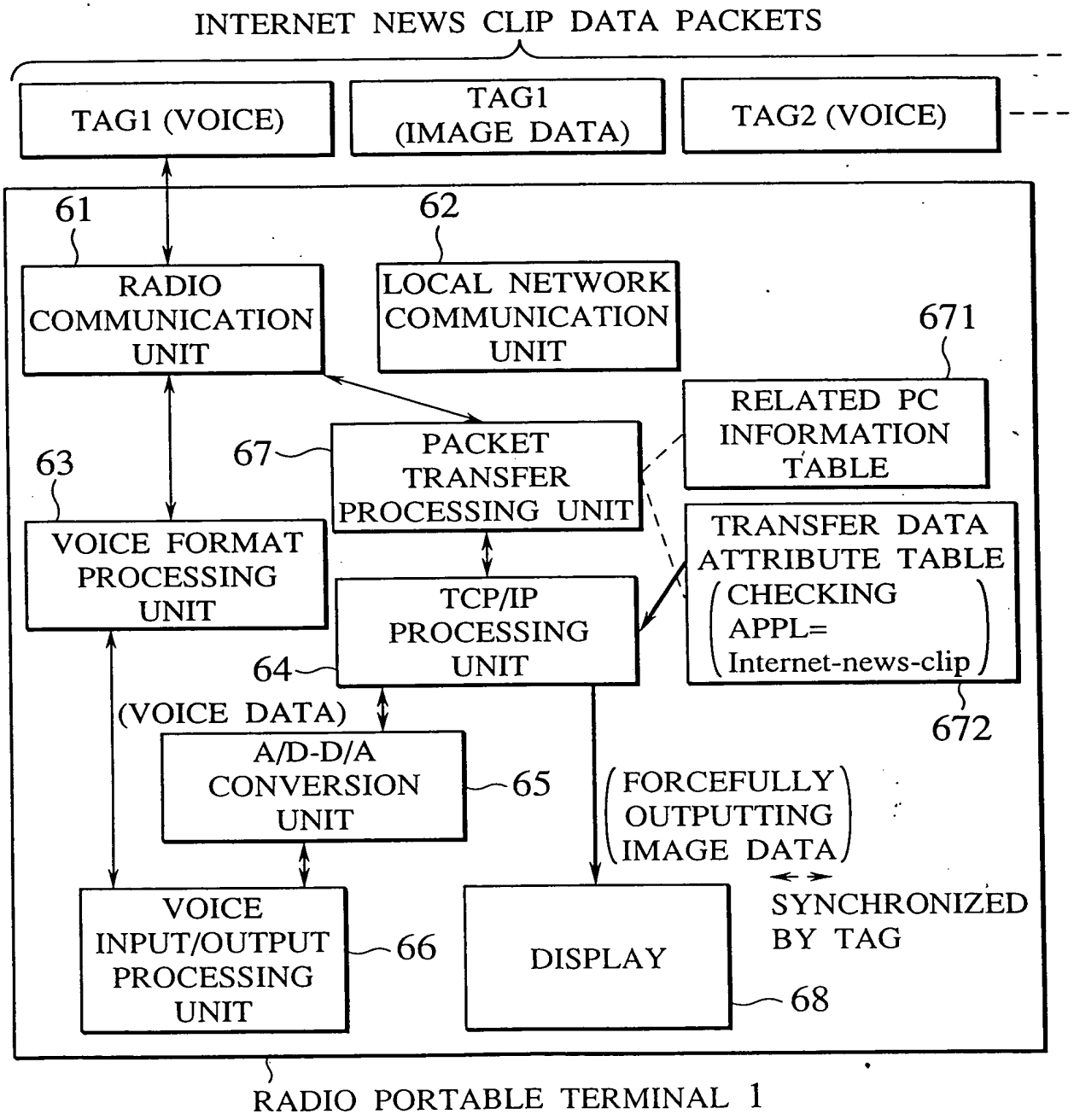
INTERNET NEWS CLIP DATA PACKETS
TAG1 (VOICE)
TAG1 (IMAGE DATA)
TAG2 (VOICE)
61
62
RADIO COMMUNICATION UNIT
LOCAL NETWORK COMMUNICATION UNIT
671
RELATED PC INFORMATION TABLE
63
67
PACKET TRANSFER PROCESSING UNIT
VOICE FORMAT PROCESSING UNIT
TRANSFER DATA ATTRIBUTE TABLE
CHECKING APPL= Internet-news-clip
TCP/IP PROCESSING UNIT
64
672
(VOICE DATA)
A/D-D/A CONVERSION UNIT
65
FORCEFULLY OUTPUTTING IMAGE DATA
SYNCHRONIZED BY TAG
VOICE INPUT/OUTPUT PROCESSING UNIT
66
DISPLAY
68
RADIO PORTABLE TERMINAL 1

FIG.10

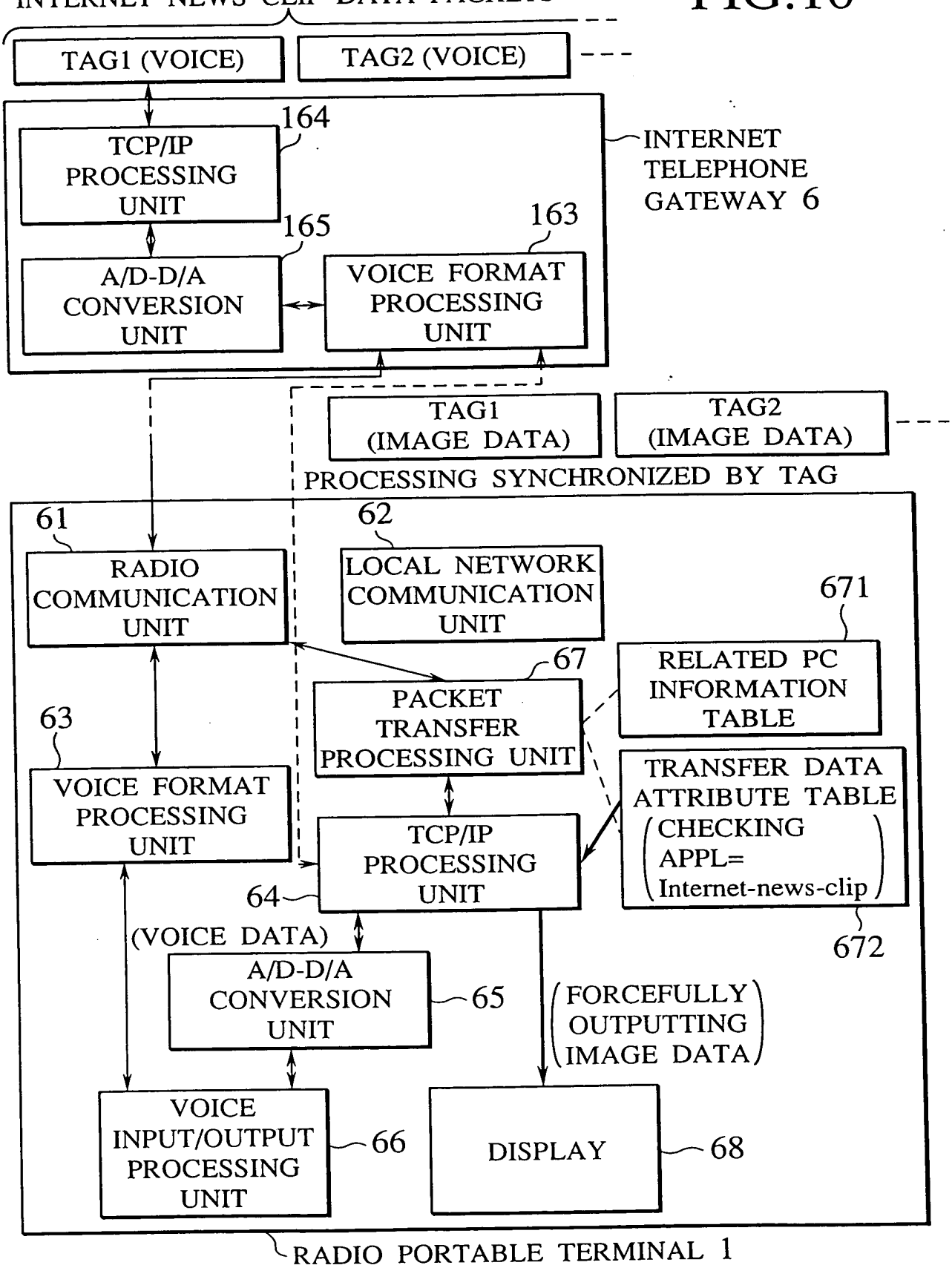
INTERNET NEWS CLIP DATA PACKETS
TAG1 (VOICE)
TAG2 (VOICE)
164
TCP/IP PROCESSING UNIT
165
A/D-D/A CONVERSION UNIT
163
VOICE FORMAT PROCESSING UNIT
INTERNET TELEPHONE GATEWAY 6
TAG1 (IMAGE DATA)
TAG2 (IMAGE DATA)
PROCESSING SYNCHRONIZED BY TAG
61
RADIO COMMUNICATION UNIT
62
LOCAL NETWORK COMMUNICATION UNIT
671
RELATED PC INFORMATION TABLE
67
PACKET TRANSFER PROCESSING UNIT
63
VOICE FORMAT PROCESSING UNIT
TRANSFER DATA ATTRIBUTE TABLE
(CHECKING APPL= Internet-news-clip)
672
TCP/IP PROCESSING UNIT
64
(VOICE DATA)
A/D-D/A CONVERSION UNIT
65
(FORCEFULLY OUTPUTTING IMAGE DATA)
VOICE INPUT/OUTPUT PROCESSING UNIT
66
DISPLAY
68
RADIO PORTABLE TERMINAL 1

FIG.11

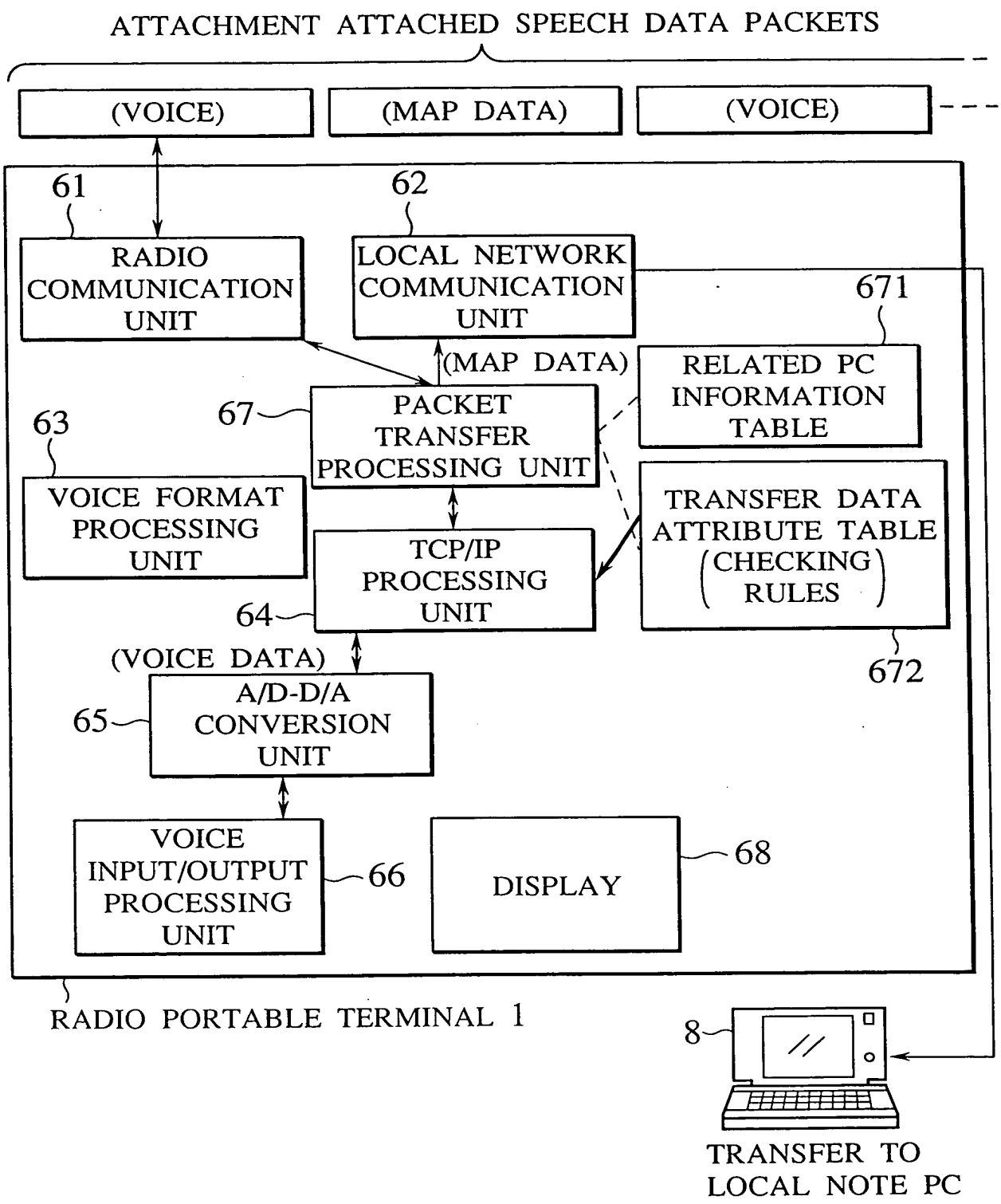
ATTACHMENT ATTACHED SPEECH DATA PACKETS
(VOICE)
(MAP DATA)
(VOICE)
61
62
RADIO COMMUNICATION UNIT
LOCAL NETWORK COMMUNICATION UNIT
671
(MAP DATA)
RELATED PC INFORMATION TABLE
67
PACKET TRANSFER PROCESSING UNIT
63
VOICE FORMAT PROCESSING UNIT
TRANSFER DATA ATTRIBUTE TABLE (CHECKING RULES)
TCP/IP PROCESSING UNIT
64
672
(VOICE DATA)
A/D-D/A CONVERSION UNIT
65
VOICE INPUT/OUTPUT PROCESSING UNIT
66
DISPLAY
68
RADIO PORTABLE TERMINAL 1
8
TRANSFER TO LOCAL NOTE PC

FIG.12

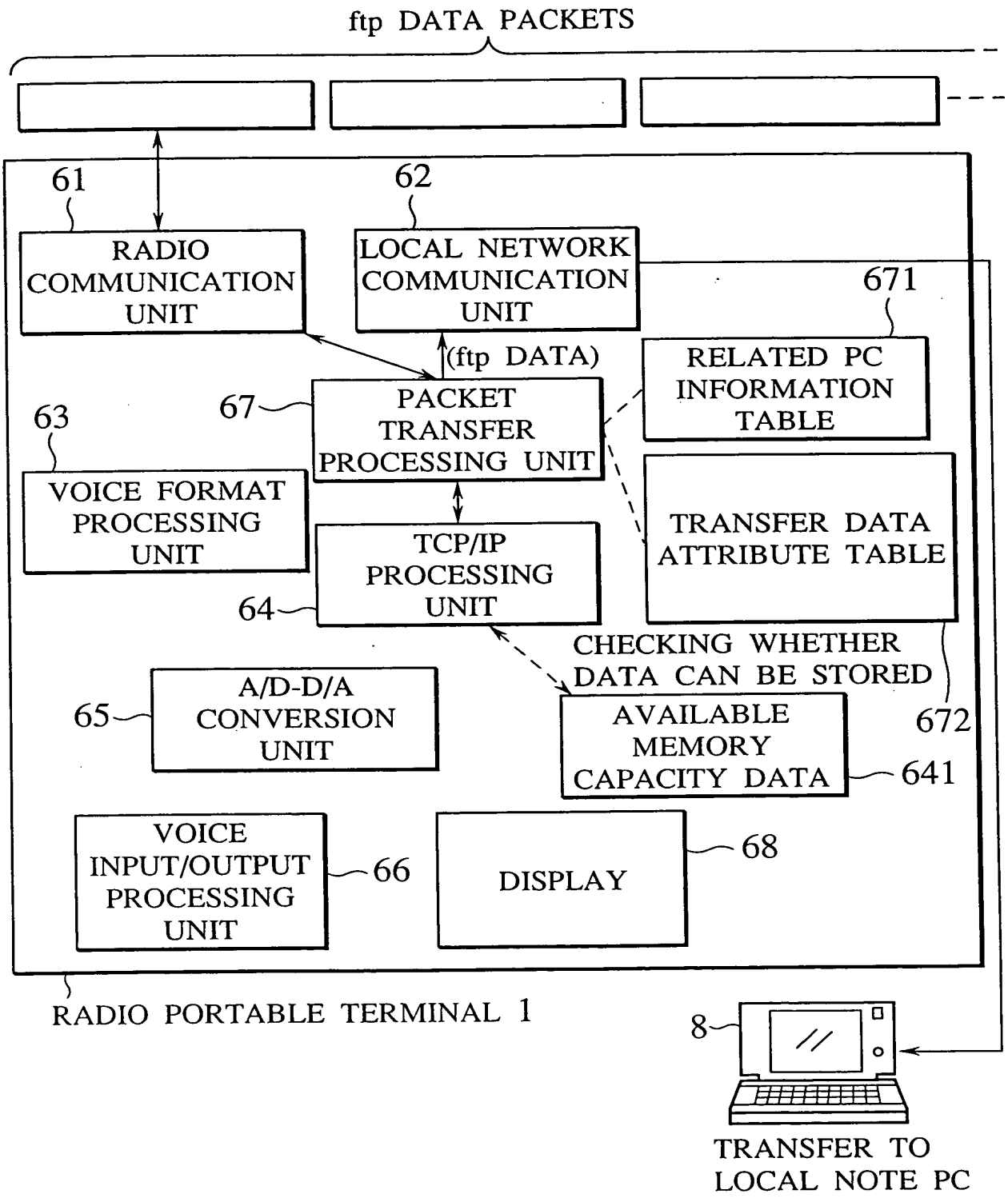
ftp DATA PACKETS
61
62
RADIO COMMUNICATION UNIT
LOCAL NETWORK COMMUNICATION UNIT
671
(ftp DATA)
RELATED PC INFORMATION TABLE
67
PACKET TRANSFER PROCESSING UNIT
63
VOICE FORMAT PROCESSING UNIT
TRANSFER DATA ATTRIBUTE TABLE
TCP/IP PROCESSING UNIT
64
CHECKING WHETHER DATA CAN BE STORED
672
A/D-D/A CONVERSION UNIT
65
AVAILABLE MEMORY CAPACITY DATA
641
VOICE INPUT/OUTPUT PROCESSING UNIT
66
DISPLAY
68
RADIO PORTABLE TERMINAL 1
8
TRANSFER TO LOCAL NOTE PC

FIG.13

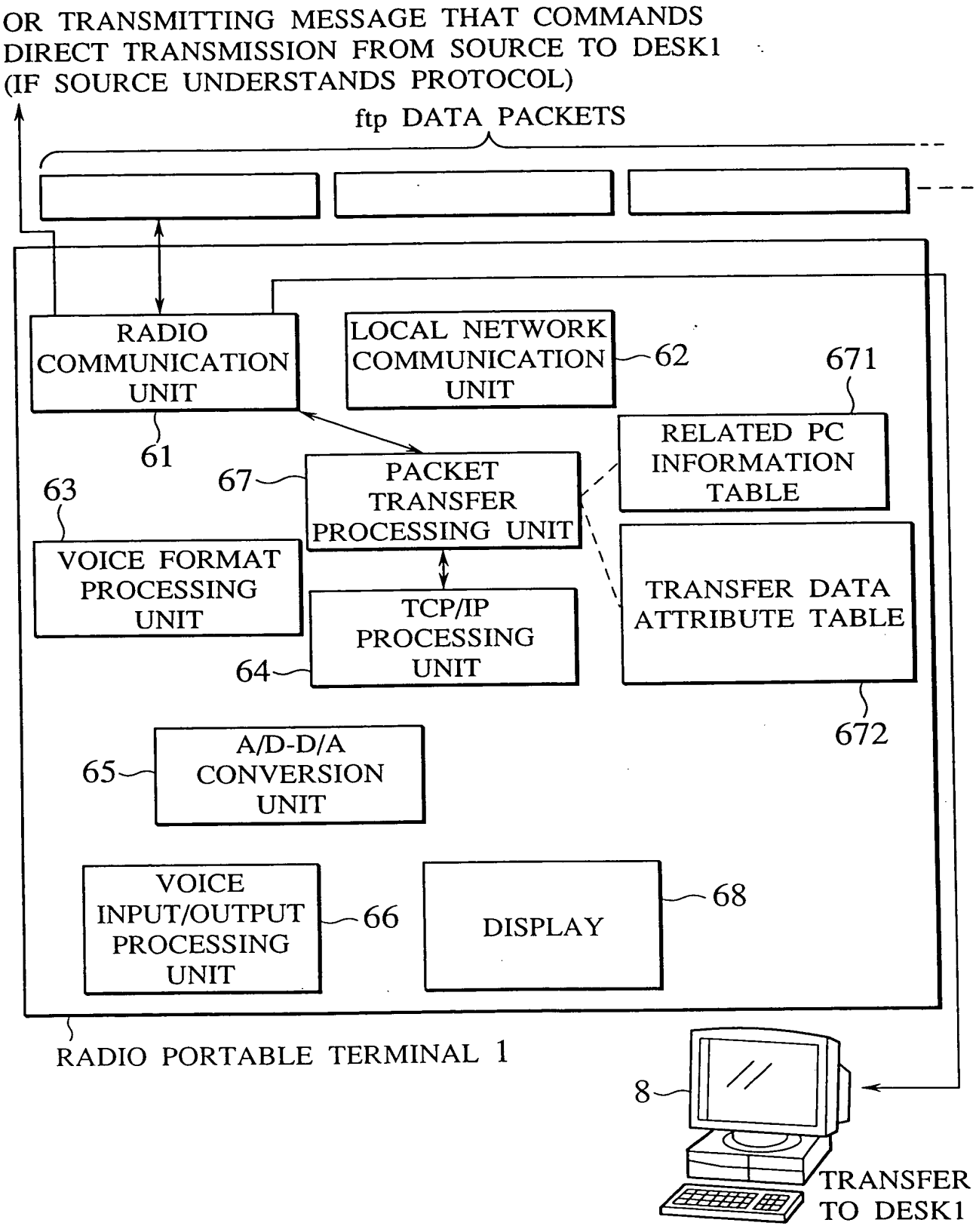
OR TRANSMITTING MESSAGE THAT COMMANDS
DIRECT TRANSMISSION FROM SOURCE TO DESK1
(IF SOURCE UNDERSTANDS PROTOCOL)
ftp DATA PACKETS
RADIO COMMUNICATION UNIT
61
LOCAL NETWORK COMMUNICATION UNIT
62
671
RELATED PC INFORMATION TABLE
63
67
PACKET TRANSFER PROCESSING UNIT
VOICE FORMAT PROCESSING UNIT
TCP/IP PROCESSING UNIT
64
TRANSFER DATA ATTRIBUTE TABLE
672
65
A/D-D/A CONVERSION UNIT
VOICE INPUT/OUTPUT PROCESSING UNIT
66
DISPLAY
68
RADIO PORTABLE TERMINAL 1
8
TRANSFER TO DESK1

FIG.14

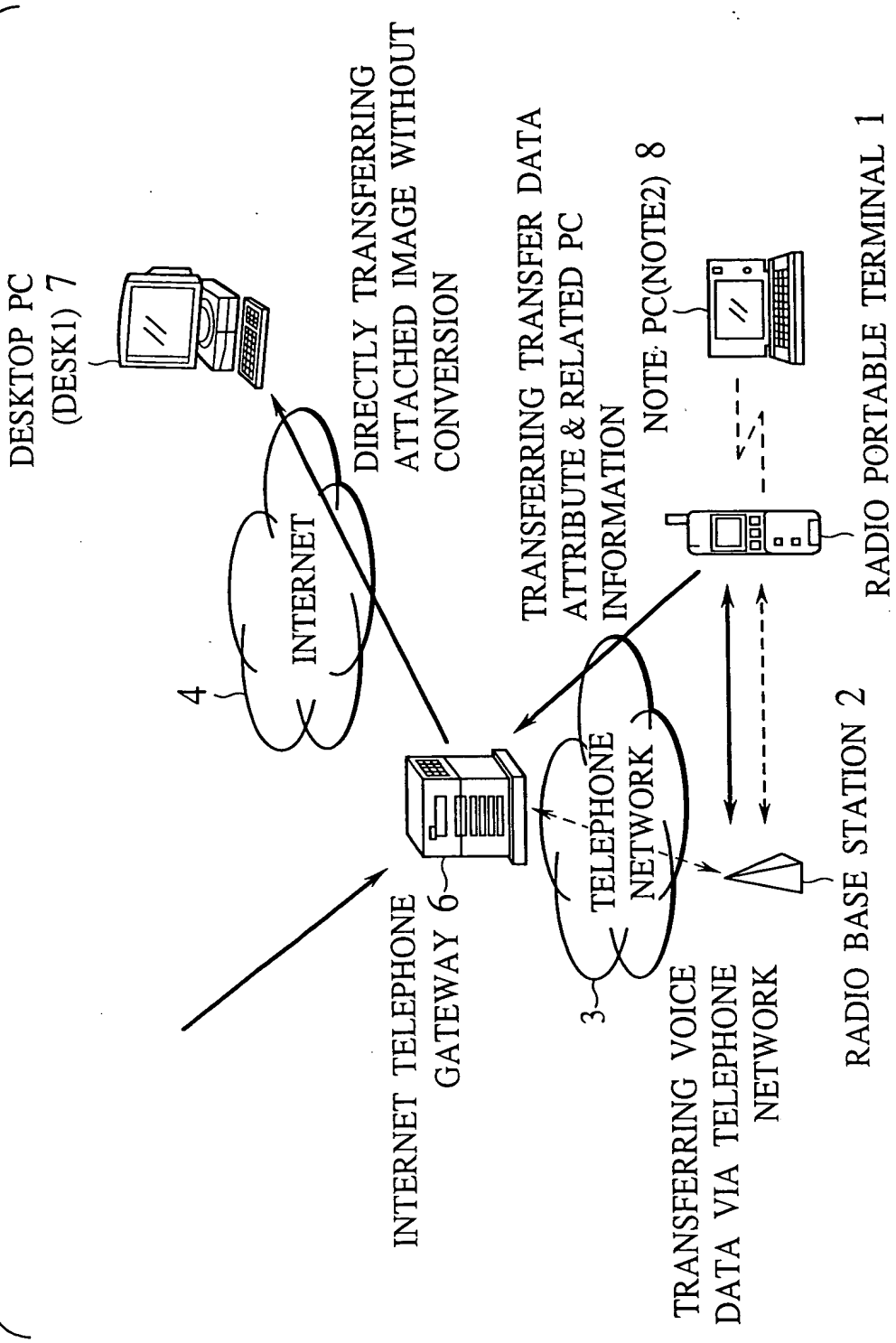
DESKTOP PC
(DESK1) 7
DIRECTLY TRANSFERRING
ATTACHED IMAGE WITHOUT
CONVERSION
INTERNET
4
TRANSFERRING TRANSFER DATA
ATTRIBUTE & RELATED PC
INFORMATION
NOTE PC(NOTE2) 8
INTERNET TELEPHONE
GATEWAY 6
TELEPHONE
NETWORK
3
TRANSFERRING VOICE
DATA VIA TELEPHONE
NETWORK
RADIO BASE STATION 2
RADIO PORTABLE TERMINAL 1

FIG.15

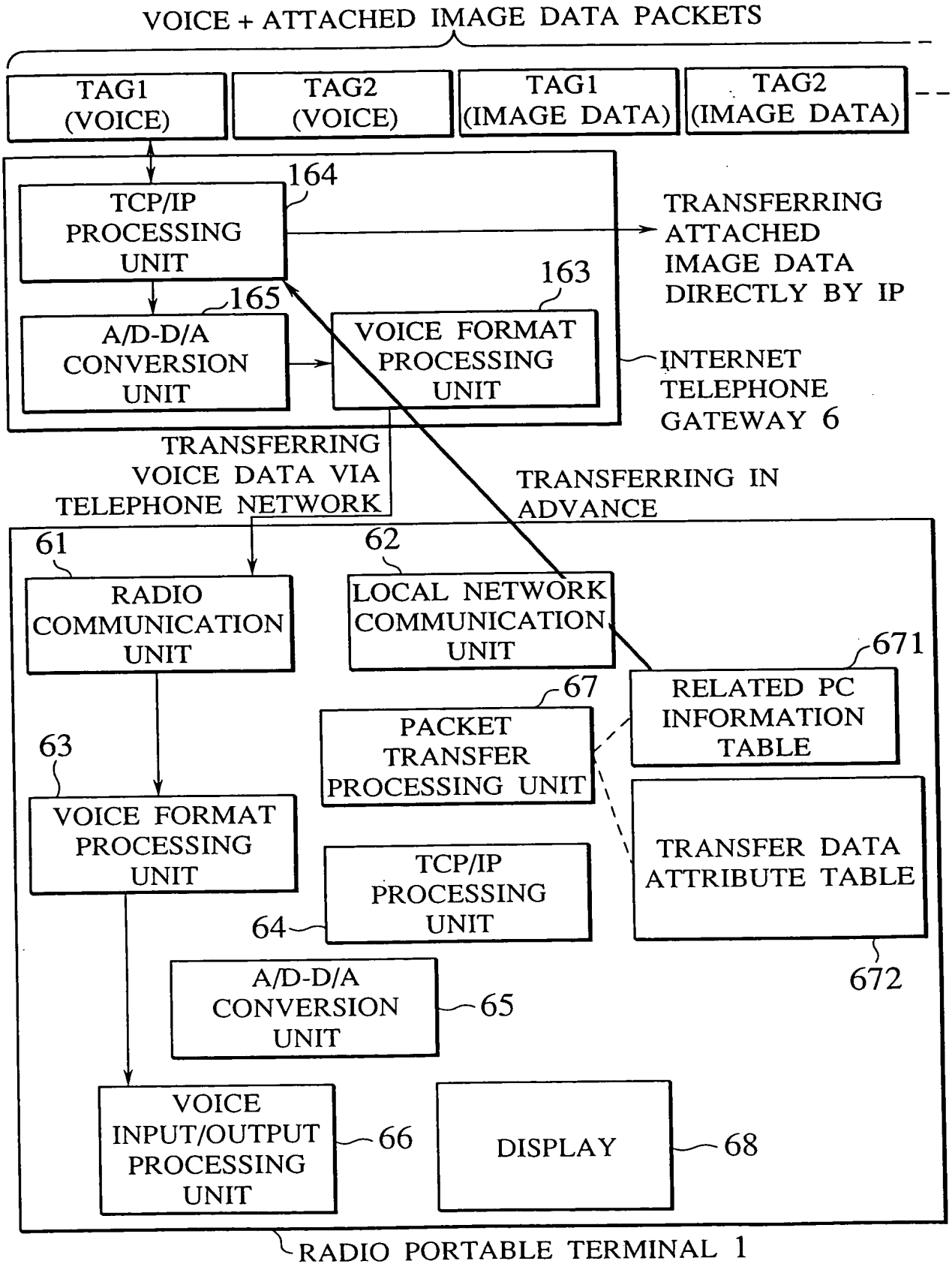
VOICE + ATTACHED IMAGE DATA PACKETS
TAG1 (VOICE)
TAG2 (VOICE)
TAG1 (IMAGE DATA)
TAG2 (IMAGE DATA)
164
TCP/IP PROCESSING UNIT
TRANSFERRING ATTACHED IMAGE DATA DIRECTLY BY IP
163
165
A/D-D/A CONVERSION UNIT
VOICE FORMAT PROCESSING UNIT
INTERNET TELEPHONE GATEWAY 6
TRANSFERRING VOICE DATA VIA TELEPHONE NETWORK
TRANSFERRING IN ADVANCE
61
62
RADIO COMMUNICATION UNIT
LOCAL NETWORK COMMUNICATION UNIT
671
67
RELATED PC INFORMATION TABLE
PACKET TRANSFER PROCESSING UNIT
63
VOICE FORMAT PROCESSING UNIT
TRANSFER DATA ATTRIBUTE TABLE
TCP/IP PROCESSING UNIT
64
672
A/D-D/A CONVERSION UNIT
65
VOICE INPUT/OUTPUT PROCESSING UNIT
66
DISPLAY
68
RADIO PORTABLE TERMINAL 1

FIG.16

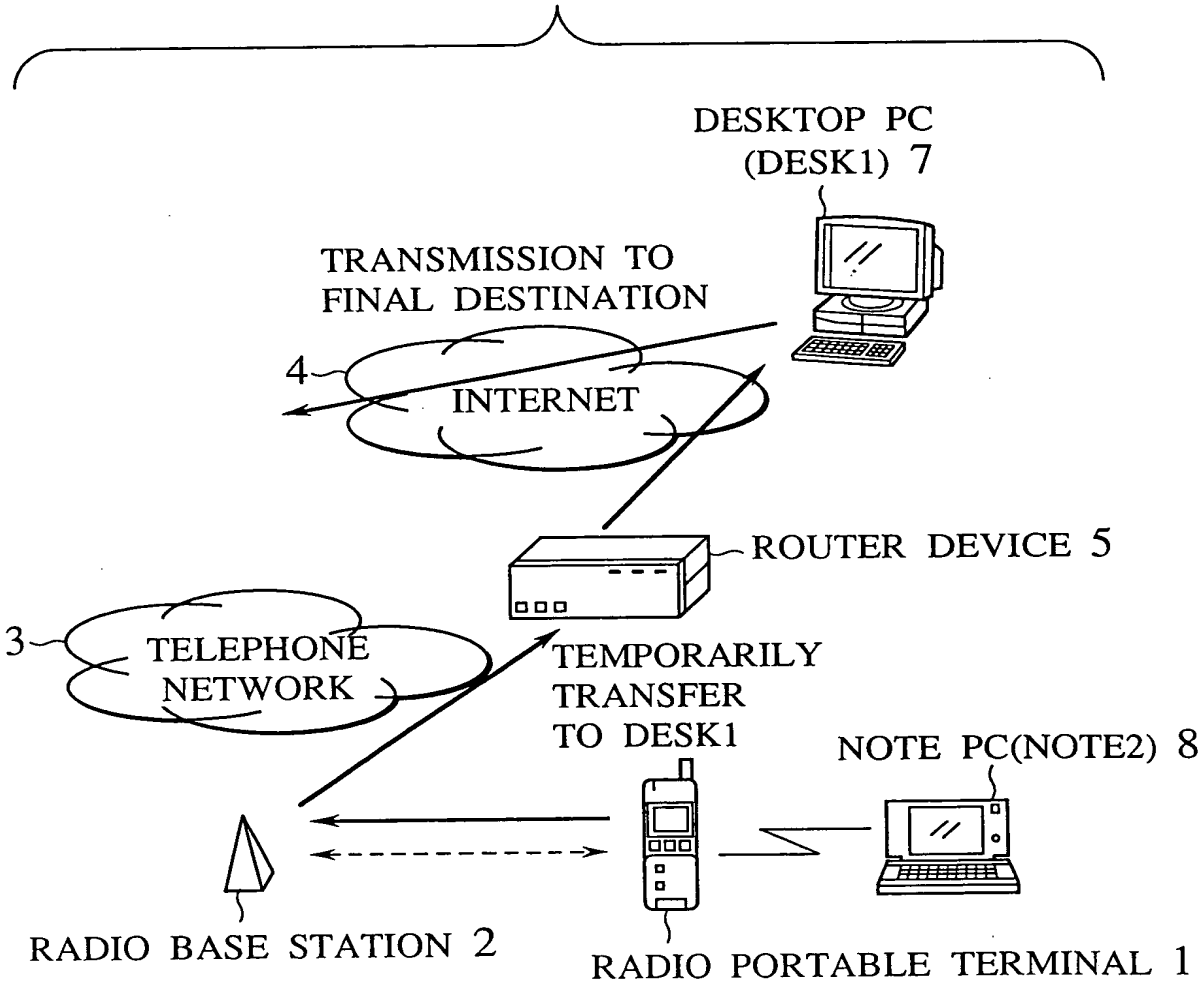
DESKTOP PC
(DESK1) 7
TRANSMISSION TO
FINAL DESTINATION
4
INTERNET
ROUTER DEVICE 5
3
TELEPHONE
NETWORK
TEMPORARILY
TRANSFER
TO DESK1
NOTE PC(NOTE2) 8
RADIO BASE STATION 2
RADIO PORTABLE TERMINAL 1

FIG.17

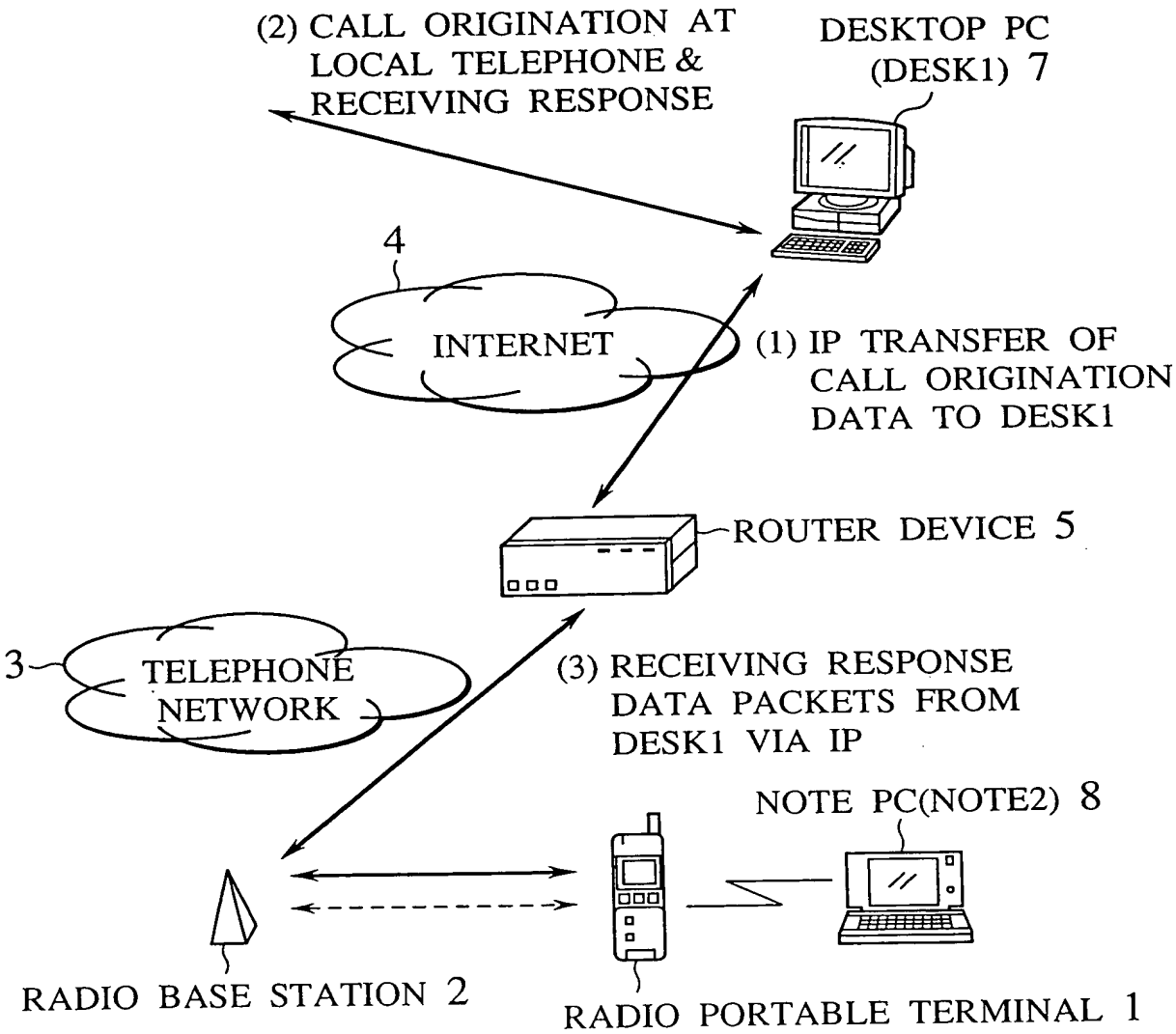
(2) CALL ORIGINATION AT LOCAL TELEPHONE & RECEIVING RESPONSE
DESKTOP PC (DESK1) 7
4
INTERNET
(1) IP TRANSFER OF CALL ORIGINATION DATA TO DESK1
ROUTER DEVICE 5
3
TELEPHONE NETWORK
(3) RECEIVING RESPONSE DATA PACKETS FROM DESK1 VIA IP
NOTE PC(NOTE2) 8
RADIO BASE STATION 2
RADIO PORTABLE TERMINAL 1

FIG.18

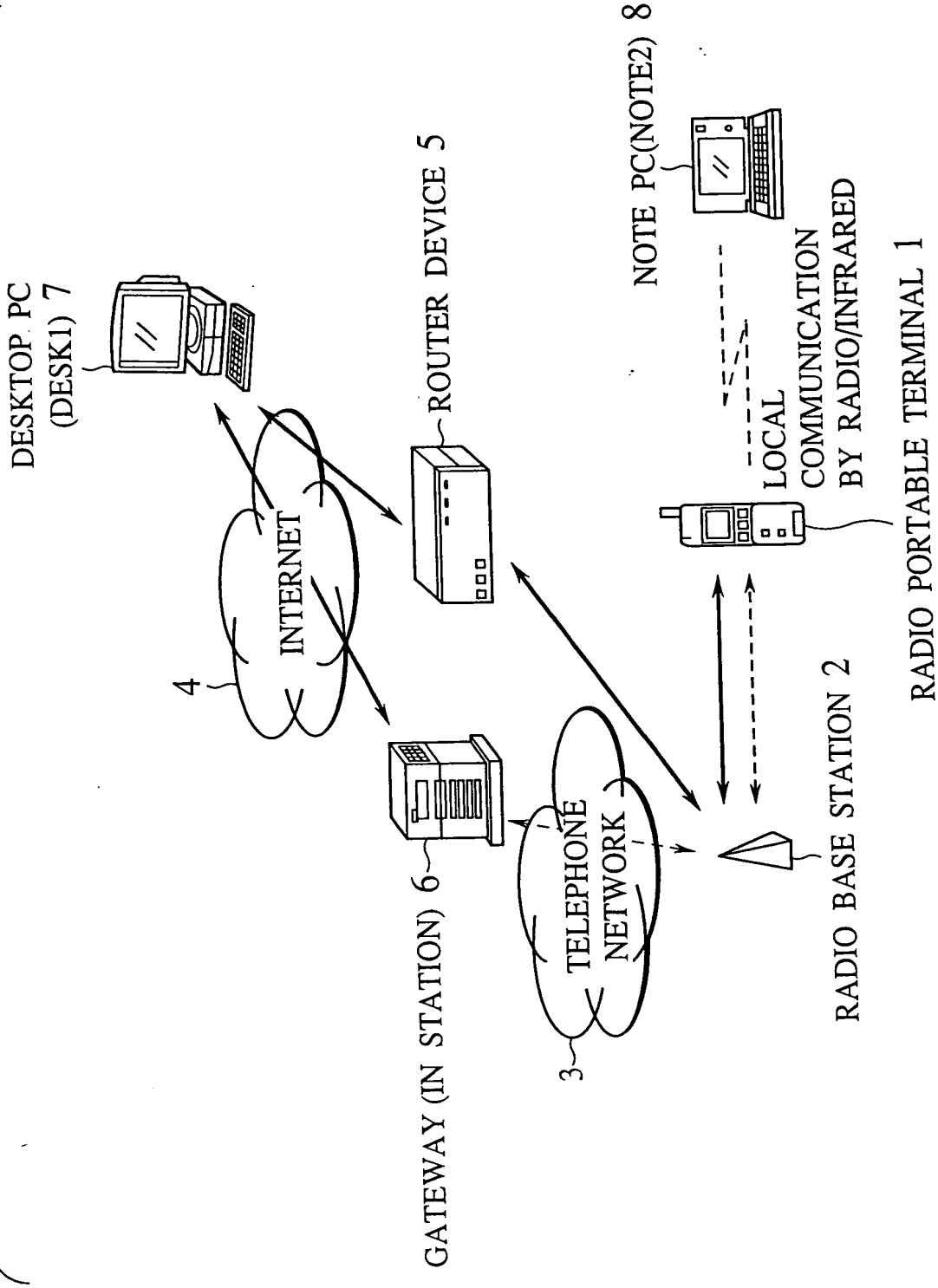
DESKTOP PC
(DESK1) 7
INTERNET
4
ROUTER DEVICE 5
NOTE PC(NOTE2) 8
LOCAL
COMMUNICATION
BY RADIO/INFRARED
RADIO PORTABLE TERMINAL 1
GATEWAY (IN STATION) 6
TELEPHONE
NETWORK
3
RADIO BASE STATION 2

FIG.19
PRIOR ART

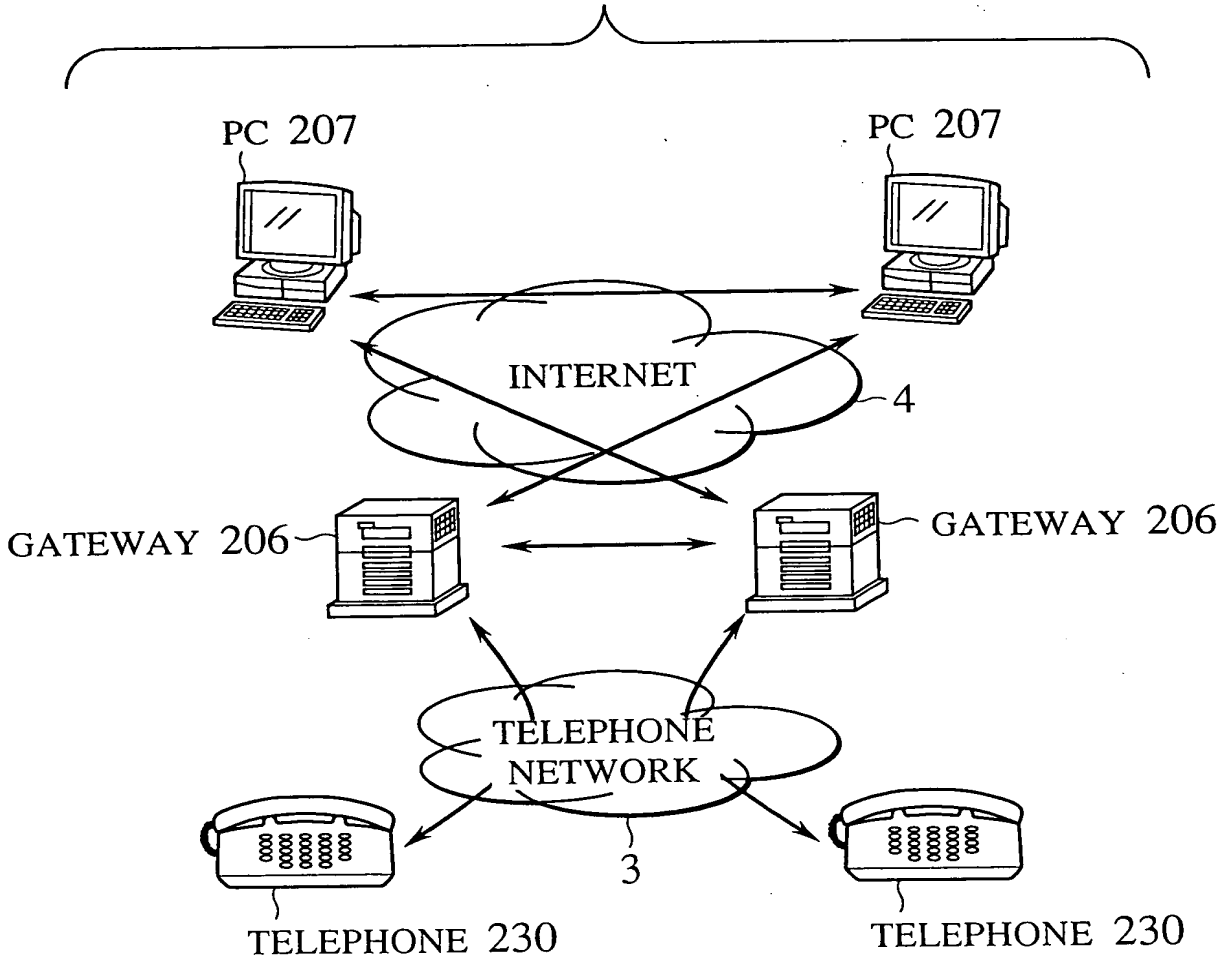
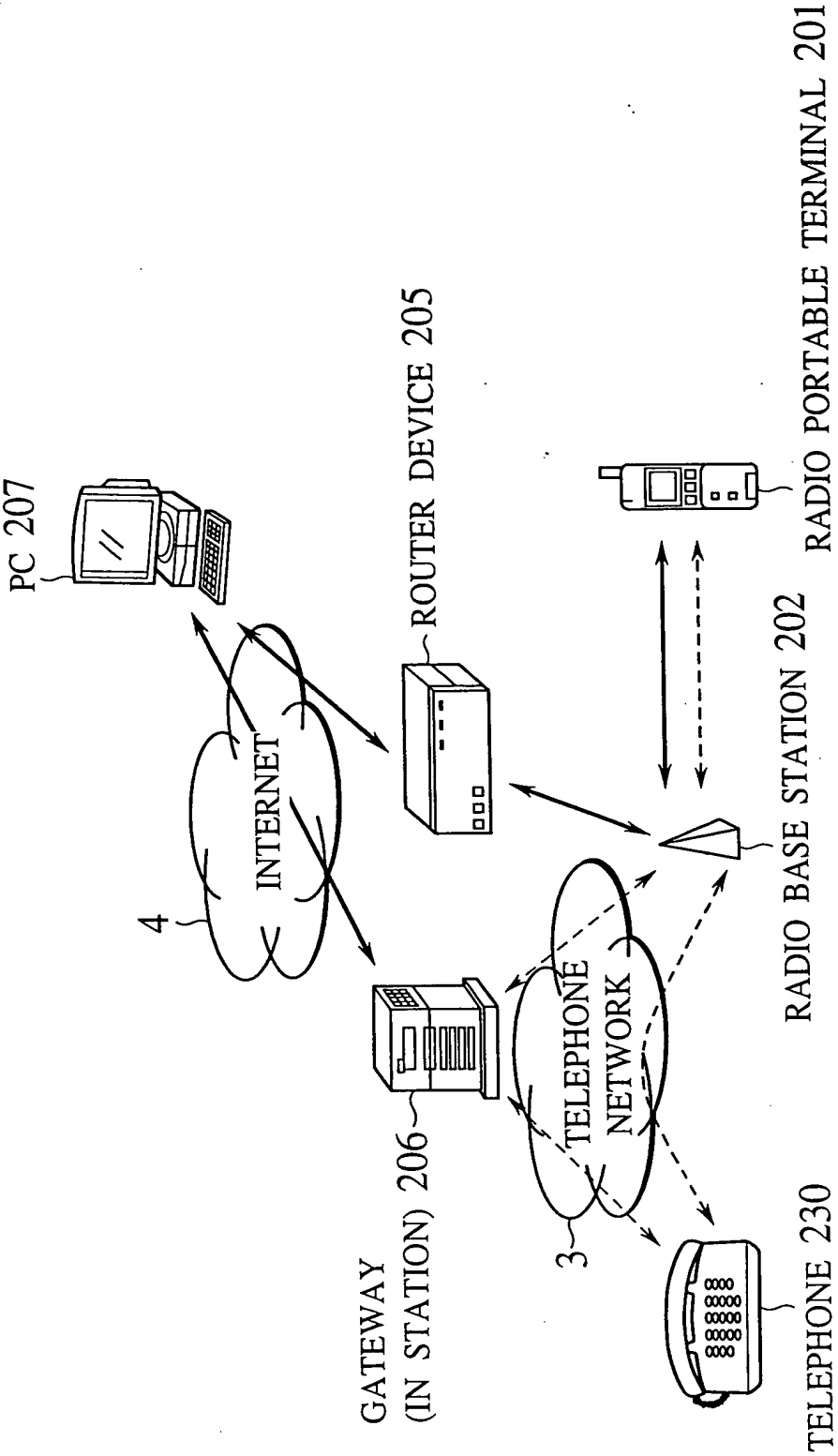
FIG.20
PRIOR ART